What is claimed is:

1. A method for storing electric energy, comprising the steps of:

(a) supplying electric charges and energy from an electric power source to a negative conductive plate and a positive conductive plate to establish and maintain an electric potential difference between said negative conductive plate and said positive conductive plate equal to the dc voltage of said electric power source, and

(b) transferring electric charges and energy from said negative conductive plate and said positive conductive plate to each of a great multitude of dispersed particles of various shapes and sizes in a dispersing medium and to the surfaces of an insulating divider using a particle-to-particle charge pumping procedure, and

(c) accumulating electric charges on the outside surface of each said dispersed particle in said dispersing medium and on said surfaces of said insulating divider by said particle-to-particle charge pumping procedure where said dispersed particles are free to move and make periodic contact to convey electric charges, and

(d) preventing stored electric energy from dissipating by stopping said stored electric charges from escaping by containing equally charged and repelling said dispersed particles in an insulator casing or by having said electric charges electrically bound to said surfaces of said insulating divider, and

(e) isolating said negative conductive plate and said positive conductive plate from said electric power source, whereby a large quantity of electric energy is stored in a small mass and volume at a very high electric potential that can be supplied to an electrical load device very rapidly.

2. A method for retrieving stored electric energy, comprising the steps of:

(a) connecting a negative conductive plate and positive conductive plate to an electrical load device to reduce the electric potential difference between said negative conductive plate and said positive plate and convert stored electric energy into electric current flowing through said electrical load device, and

(b) allowing stored electric energy to diminish and electric charges to dissipate by permitting equally charged and repelling dispersed particles in a dispersing medium

contained in an insulator casing to move freely inside said insulator casing to make periodic contact with each other and convey electric charges, and

(c) transferring electric charges and energy to said negative conductive plate and said positive conductive plate from each of a great multitude of said dispersed particles of various shapes and sizes in said dispersing medium and from the surfaces of an insulating divider using a particle-to-particle charge pumping procedure, and

(d) reducing the energy and number of electric charges accumulated on the outside surface of each said dispersed particle in said dispersing medium and on said surfaces of said insulating divider by said particle-to-particle charge pumping procedure, whereby a large quantity of electric energy that was stored in a small mass and volume at a very high electric potential is supplied to an electrical load device very rapidly in an effective and efficient manner.

3. An apparatus for storing electric energy, comprising

(a) a negative conductive plate and a positive conductive plate separated from each other by a predetermined distance where an electric potential difference can be established and maintained by an electric power source or where connections can instead be made to an electrical load device, and

(b) an insulating divider of predetermined thickness with a high dielectric constant and high dielectric strength for dividing the space inside an insulator casing and separating said positive conductive plate at one end from said negative conductive plate at the other end, and

(c) a great multitude of dispersed particles of various shapes, sizes, and compositions in a dispersing medium contained in at least one chamber formed inside said insulator casing between said insulating divider and said negative conductive plate or said positive conductive plate, whereby a large quantity of electric charges and energy can be stored on the surfaces of each of said dispersed particle in said dispersing medium and on the surfaces of said insulating divider in a small mass and volume.

4. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of a solid material that is a good conductor of electric current.

5. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of a solid material that is an insulator and a poor conductor of electric current.

6. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of a solid semiconductor material.

7. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of ions or molecules with an electrical charge.

8. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of ions adsorbed to the surface of particles of various materials and compositions.

9. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of gaseous matter.

10. The apparatus of Claim 3 wherein said dispersed particles in said dispersing medium are each comprised of liquid matter.

11. The apparatus of Claim 3 wherein said dispersing medium is comprised of a liquid.

12. The apparatus of Claim 3 wherein said dispersing medium is comprised of a gas.

13. The apparatus of Claim 3 wherein said dispersing medium is comprised of a solid.

14. The apparatus of Claim 3 wherein said dispersing medium is comprised of an electrolyte.

15. The apparatus of Claim 3 wherein said dispersing medium is comprised of a non-electrolyte.